

FIG 1

5'	GGC	GGA	GGC	GGA	GGC	GGA	GGG	CGA	GGG	GCG	GGG	AGC	GCC	GCC	TGG	AGC	GCG	GCA
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	GGT	CAT	ATT	GAA	CAT	TCC	AGA	TAC	CTA	TCA	TTA	CTC	GAT	GCT	GTT	GAT	AAC	AGC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	AAG	ATG	GCT	TTG	AAC	TCA	GGG	TCA	CCA	CCA	GCT	ATT	GGA	CCT	TAC	TAT	GAA	AAC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	M	A	L	N	S	G	S	P	P	A	I	G	P	Y	Y	E	N	
	CAT	GGA	TAC	CAA	CCG	GAA	AAC	CCC	TAT	CCC	GCA	CAG	CCC	ACT	GTG	GTC	CCC	ACT
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	H	G	Y	Q	P	E	N	P	Y	P	A	Q	P	T	V	V	P	T
	GTC	TAC	GAG	GTG	CAT	CCG	GCT	CAG	TAC	TAC	CCG	TCC	CCC	GTG	CCC	CAG	TAC	GCC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	V	Y	E	V	H	P	A	Q	Y	Y	P	S	P	V	P	Q	Y	A
	CCG	AGG	GTC	CTG	ACG	CAG	GCT	TCC	AAC	CCC	GTC	GTC	TGC	ACG	CAG	CCC	AAA	TCC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	P	R	V	L	T	Q	A	S	N	P	V	V	C	T	Q	P	K	S
	CCA	TCC	GGG	ACA	GTG	TGC	ACC	TCA	AAG	ACT	AAG	AAA	GCA	CTG	TGC	ATC	ACC	TTG
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	P	S	G	T	V	C	T	S	K	T	K	K	A	L	C	I	T	L
	ACC	CTG	GGG	ACC	TTC	CTC	GTG	GGA	GCT	GCG	CTG	GCC	GCT	GGC	CTA	CTC	TGG	AAG
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	T	L	G	T	F	L	V	G	A	A	L	A	A	G	L	L	W	K
	TTC	ATG	GGC	AGC	AAG	TGC	TCC	AAC	TCT	GGG	ATA	GAG	TGC	GAC	TCC	TCA	GGT	ACC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	F	M	G	S	K	C	S	N	S	G	I	E	C	D	S	S	G	T
	TGC	ATC	AAC	CCC	TCT	AAC	TGG	TGT	GAT	GGC	GTG	TCA	CAC	TGC	CCC	GGC	GGG	GAG
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	C	I	N	P	S	N	W	C	D	G	V	S	H	C	P	G	G	E
	GAC	GAG	AAT	CGG	TGT	GTT	CGC	CTC	TAC	GGA	CCA	AAC	TTC	ATC	CTT	CAG	GTG	TAC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	D	E	N	R	C	V	R	L	Y	G	P	N	F	I	L	Q	V	Y
	TCA	TCT	CAG	AGG	AAG	TCC	TGG	CAC	CCT	GTG	TGC	CAA	GAC	GAC	TGG	AAC	GAG	AAC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	S	S	Q	R	K	S	W	H	P	V	C	Q	D	D	W	N	E	N
	TAC	GGG	CGG	GCG	GCC	TGC	AGG	GAC	ATG	GGC	TAT	AAG	AAT	AAT	TTT	TAC	TCT	AGC
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Y	G	R	A	A	C	R	D	M	G	Y	K	N	N	F	Y	S	S

CAA	GGA	713	ATA	GTG	GAT	722	GAC	AGC	GGA	731	TCC	ACC	AGC	740	TTT	ATG	AAA	749	CTG	AAC	ACA	758	AGT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Q	G	I	V	D	D	S	G	S	T	S	F	M	K	L	N	T	S						
GCC	GGC	767	AAT	GTC	GAT	776	ATC	TAT	AAA	785	AAA	CTG	TAC	794	CAC	AGT	GAT	803	GCC	TGT	TCT	812	TCA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
A	G	N	V	D	I	Y	K	K	L	Y	H	S	D	A	C	S	S						
AAA	GCA	821	GTG	GTT	TCT	830	TTA	CGC	TGT	839	ATA	GCC	TGC	848	GGG	GTC	AAC	857	TTG	AAC	TCA	866	AGC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K	A	V	V	S	L	R	C	I	A	C	G	V	N	L	N	S	S						
CGC	CAG	875	AGC	AGG	ATT	884	GTG	GGC	GGC	893	GAG	AGC	GCG	902	CTC	CCG	GGG	911	GCC	TGG	CCC	920	TGG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
R	Q	S	R	I	V	G	G	E	S	A	L	P	G	A	W	P	W						
CAG	GTC	929	AGC	CTG	CAC	938	GTC	CAG	AAC	947	GTC	CAC	GTG	956	TGC	GGA	GGC	965	TCC	ATC	ATC	974	ACC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Q	V	S	L	H	V	Q	N	V	H	V	C	G	G	S	I	I	T						
CCC	GAG	983	TGG	ATC	GTG	992	ACA	GCC	GCC	1001	CAC	TGC	GTG	1010	GAA	AAA	CCT	1019	CTT	AAC	AAT	1028	CCA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P	E	W	I	V	T	A	A	H	C	V	E	K	P	L	N	N	P						
TGG	CAT	1037	TGG	ACG	GCA	1046	TTT	GCG	GGG	1055	ATT	TTG	AGA	1064	CAA	TCT	TTC	1073	ATG	TTC	TAT	1082	GGA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W	H	W	T	A	F	A	G	I	L	R	Q	S	F	M	F	Y	G						
GCC	GGA	1091	TAC	CAA	GTA	1100	GAA	AAA	GTG	1109	ATT	TCT	CAT	1118	CCA	AAT	TAT	1127	GAC	TCC	AAG	1136	ACC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
A	G	Y	Q	V	E	K	V	I	S	H	P	N	Y	D	S	K	T						
AAG	AAC	1145	AAT	GAC	ATT	1154	GCG	CTG	ATG	1163	AAG	CTG	CAG	1172	AAG	CCT	CTG	1181	ACT	TTC	AAC	1190	GAC
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
K	N	N	D	I	A	L	M	K	L	Q	K	P	L	T	F	N	D						
CTA	GTG	1199	AAA	CCA	GTG	1208	TGT	CTG	CCC	1217	AAC	CCA	GGC	1226	ATG	ATG	CTG	1235	CAG	CCA	GAA	1244	CAG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L	V	K	P	V	C	L	P	N	P	G	M	M	L	Q	P	E	Q						
CTC	TGC	1253	TGG	ATT	TCC	1262	GGG	TGG	GGG	1271	GCC	ACC	GAG	1280	GAG	AAA	GGG	1289	AAG	ACC	TCA	1298	GAA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L	C	W	I	S	G	W	G	A	T	E	E	K	G	K	T	S	E						
GTG	CTG	1307	AAC	GCT	GCC	1316	AAG	GTG	CTT	1325	CTC	ATT	GAG	1334	ACA	CAG	AGA	1343	TGC	AAC	AGC	1352	AGA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
V	L	N	A	A	K	V	L	L	I	E	T	Q	R	C	N	S	R						
TAT	GTC	1361	TAT	GAC	AAC	1370	CTG	ATC	ACA	1379	CCA	GCC	ATG	1388	ATC	TGT	GCC	1397	GGC	TTC	CTG	1406	CAG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Y	V	Y	D	N	L	I	T	P	A	M	I	C	A	G	F	L	Q						

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

FIG 2

```

1  gtcattattga acattccaga tacctatcat tactcgatgc tgttgataac agcaagatgg
61  ctttgaactc aggggtcacca ccagctattg gaccttacta tgaaaaccat ggataccaac
121 cgaaaaaacc ctatcccgca cagccactg tggteccac tgtctacgag gtgcatccg
181 ctctagtacta cccgtcccc gtgccccagt acgccccgag ggtcctgacg caggcttcca
241 acccgtcgt ctgcacgcag cccaaatccc catccgggac agtgtgcacc tcaaagacta
301 agaaagcact gtgcatcacc ttgaccctgg ggaccttcct cgtgggagct gcgtggccg
361 ctggcctact ctggaagttc atgggcagca agtgtccaa ctctgggata gagtgcgact
421 cctcaggtag ctgcatcaac cctctaaact ggtgtgatgg cgtgtcacac tgccccggcg
481 gggaggacga gaatcgggtg gttcgccctc acggaccaa cttcatcctt cagatgtact
541 catctcagag gaagtcctgg caccctgtgt gccaaagacga ctggaacgag aactacgggc
601 gggcggcctg cagggacatg ggctataaga ataattttta ctctagccaa ggaatagtgg
661 atgacagcgg atccaccagc tttatgaaac tgaacacaag tgccggcaat gtcgatattc
721 ataaaaaact gtaccacagt gatgcctgtt cttcaaaagc agtggtttct ttacgtgtgt
781 tagcctgcgg ggtcaacttg aactcaagcc gccagagcag gatcgtgggc ggtgagagcg
841 cgctcccggg ggcctggccc tggcaggtca gcctgcacgt ccagaacgct cacgtgtgcg
901 gaggtcccat catcaccccc gagtggatcg tgacagccgc ccactgcgtg gaaaaacctc
961 ttaacaatcc atggcattgg acggcatttg cggggatttt gagacaatct ttcattgtct
1021 atggagccgg ataccaagta caaaaagtga tttctcatcc aaattatgac tccaagacca
1081 agaacaatga cattgcgctg atgaagctgc agaagcctct gactttcaac gacctagtga
1141 aaccagtgtg tctgccaac ccaggcatga tgcctgcagc agaacagctc tgctggattt
1201 ccgggtgggg ggcaccgag gagaaaggga agacctcaga agtgcgaac gctgccagg
1261 tgcttctcat tgagacacag agatgcaaca gcagatatgt ctatgacaac ctgatcacac
1321 cagccatgat ctgtgccggc ttctgcagg ggaacgtcga ttcttgccag ggtgacagt
1381 gagggcctct ggtcacttcg aacaacaata tctgggtggc gataggggat acaagctggg
1441 gttctggctg tgccaaagct tacagaccag gagtgtacgg gaatgtgatg gtattcacgg
1501 actggattta tgcacaaatg aaggcaaacg gctaattccac atgggtcttcg tccttgacgt
1561 cgttttataa gaaaacaatg gggctggttt tgcttccccg tgcattgattt actcttagag
1621 atgattcaga ggtcacttca tttttattaa acagtgaact tgtctggctt tggcactctc
1681 tgccatactg tgcaggctgc agtggctccc ctgccagcc tgctctccct aaccccttgt
1741 ccgcaagggg tgatggccgg ctggttggtg gcactggcgg tcaattgttg aaggaagagg
1801 gttggaggct gccccattg agatcttcct gctgagtcct ttccaggggc caattttgga
1861 tgagcatgga gctgtcactt ctcagctgct ggatgacttg agatgaaaaa ggagagacat
1921 ggaaggggag acagccaggt ggcacctgca cggcctgccc tctggggcca ctggtagtg
1981 tccccagcct acttcacaag gggattttgc tgatgggttc ttagagcctt agcagccctg
2041 gatggtggcc agaaataaag ggaccagccc ttcattgggtg gtgacgtggg agtcaactgt
2101 aaggggaaca gaaacatttt tgttcttatg ggggtgagaat atagacagtg cccttgggtg
2161 gagggaagca attgaaaagg aacttgccct gagcactcct ggtgcaggtc tccacctgca
2221 cattgggtgg ggtcctggg agggagactc agccttcctc ctcactctcc ctgacctgac
2281 tcctagcacc ctggagagtg aatgcccctt ggtccctggc agggcgccaa gtttggcacc
2341 atgtcggcct cttcaggcct gatagtcatt ggaaattgag gtccatgggg gaaatcaagg
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2461 ctgagttcaa agccatctt

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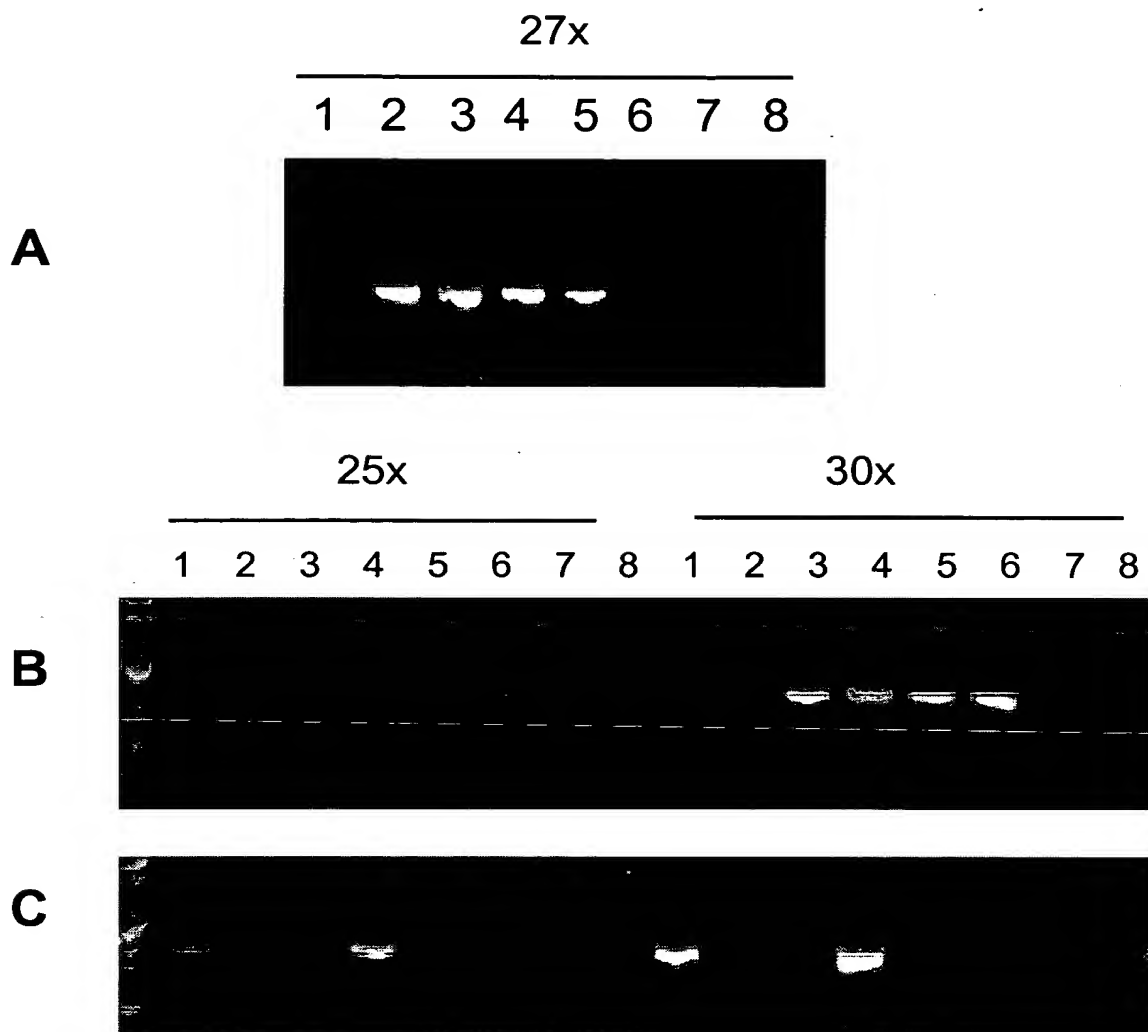
ORF AMINO ACID SEQUENCE

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DACSSKAVVSLRCLACGVNLSSRQSRIVGGESALPGAWPWQVSLHVQNVHVCGGSIITPEWIVTAAHCVEKPLNN
PWHWTAFAGILRQSFMYGAGYQVQKVISHPNYDSKTKNNDIALMKLQKPLTFNDLVKPVCLPNPGMMLQPEQLCW
ISGWGATEEKGTSEVLNAAKVLLIETQRCNSRYVDNLI TPAMICAGFLQGNVDSCQGDGSGGPLVTSNNNIWWLI
GDTSWGSGCAKAYRPGVYGNVMVFTDWIYRQMKANG

FIG 3

1	15 16	30 31	45 46	60 61	75 76	90	
	GTC1	MALNSGPPAIGPY ENHGYQENPYPAQ	TVPTVYEVHPAQY	PSVPQYAPRVLTA	SNPVCTQPKSPGT	VCTSKTKKALCITLT	90
	TMPRSS2	MALNSGPPAIGPY ENHGYQENPYPAQ	TVPTVYEVHPAQY	PSVPQYAPRVLTA	SNPVCTQPKSPGT	VCTSKTKKALCITLT	90
	91	105 106	120 121	135 136	150 151	165 166	180
	GTC1	LGTFLVGAALAAAGLL WKFMGSKCSNGIEC	DSSGTCINPSNWC	DG VSHCPGGEDENRCVR	LYGPNFILQVYSSQR	KSWHPVCQDDWNENY	180
	TMPRSS2	LGTFLVGAALAAAGLL WKFMGSKCSNGIEC	DSSGTCINPSNWC	DG VSHCPGGEDENRCVR	LYGPNFILQVYSSQR	KSWHPVCQDDWNENY	180
	181	195 196	210 211	225 226	240 241	255 256	270
	GTC1	GRAACRDMGYKNNFY SSQGIIVDDSGSTFM	KLNTSAGNVDIYKLL	YHSDACSSKAWSLR	CIACGVNLNSSRQSR	IVGGESALPGAWPWQ	270
	TMPRSS2	GRAACRDMGYKNNFY SSQGIIVDDSGSTFM	KLNTSAGNVDIYKLL	YHSDACSSKAWSLR	CIACGVNLNSSRQSR	IVGGESALPGAWPWQ	270
	271	285 286	300 301	315 316	330 331	345 346	360
	GTC1	VSLHVQNVHVCGGSI ITPEWIVTAACHC	VEK PLNNPWHWTAFAGIL	RQSFMYGAGYQVEK	VISHPNYDSKTKNND	IALMKLQKPLTFNDL	360
	TMPRSS2	VSLHVQNVHVCGGSI ITPEWIVTAACHC	VEK PLNNPWHWTAFAGIL	RQSFMYGAGYQVEK	VISHPNYDSKTKNND	IALMKLQKPLTFNDL	360
	361	375 376	390 391	405 406	420 421	435 436	450
	GTC1	VKPVCLPNPGMMLQP EQLCWISGWGATEEK	GKTSEVLNAAKVLII	ETQRCNSRYVDNLI	TPAMICAGFLOQNV	SCQDSDGGPLVTSKN	450
	TMPRSS2	VKPVCLPNPGMMLQP EQLCWISGWGATEEK	GKTSEVLNAAKVLII	ETQRCNSRYVDNLI	TPAMICAGFLOQNV	SCQDSDGGPLVTSNN	450
	451	465 466	480 481	495 496	510 511	525 526	540
	GTC1	NIWLLIGDTSWGGC AKAYRPGYGVNVMVF	TDWIYRQMRADG	492			
	TMPRSS2	NIWLLIGDTSWGGC AKAYRPGYGVNVMVF	TDWIYRQMKANG	492			

FIG. 5



A

1. Brain
2. Prostate
3. LAPC-4 AD
4. LAPC-4 AI
5. LAPC-9 AD
6. HeLa
7. Murine cDNA
8. Neg. control

B

1. Brain
2. Heart
3. Kidney
4. Liver
5. Lung
6. Pancreas
7. Placenta
8. Skeletal Muscle

C

1. Colon
2. Ovary
3. Leukocytes
4. Prostate
5. Small Intestine
6. Spleen
7. Testis
8. Thymus

FIG. 6

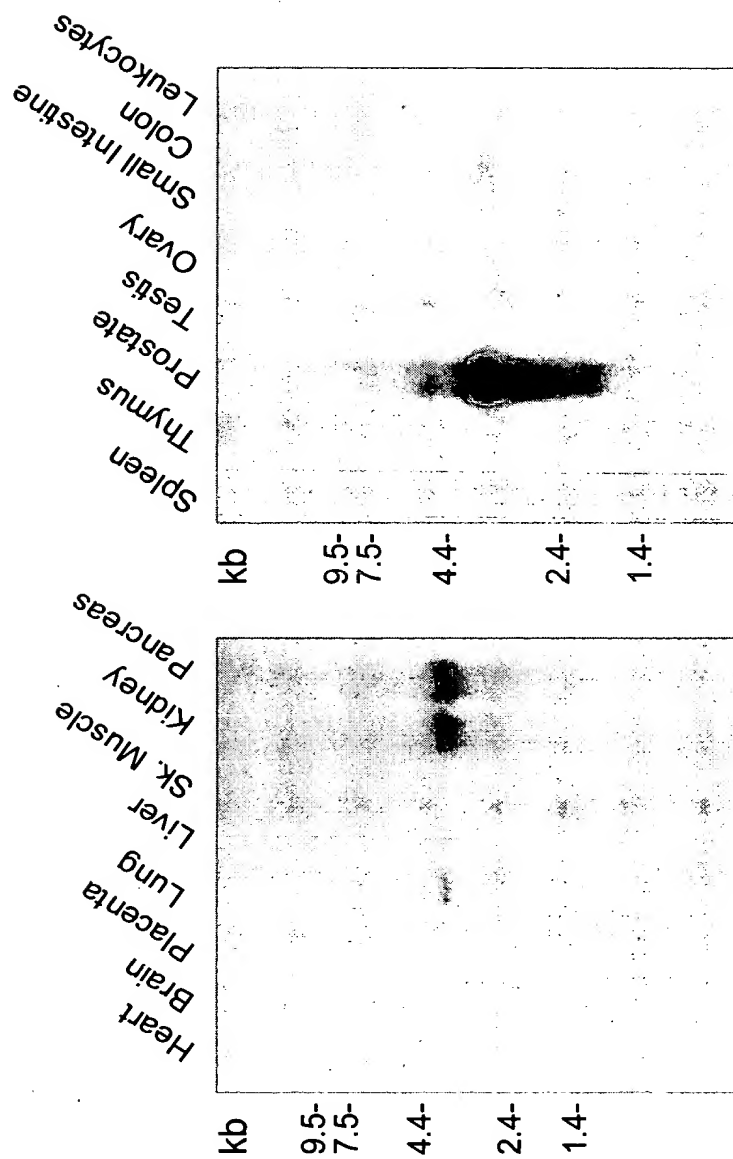


FIG. 7

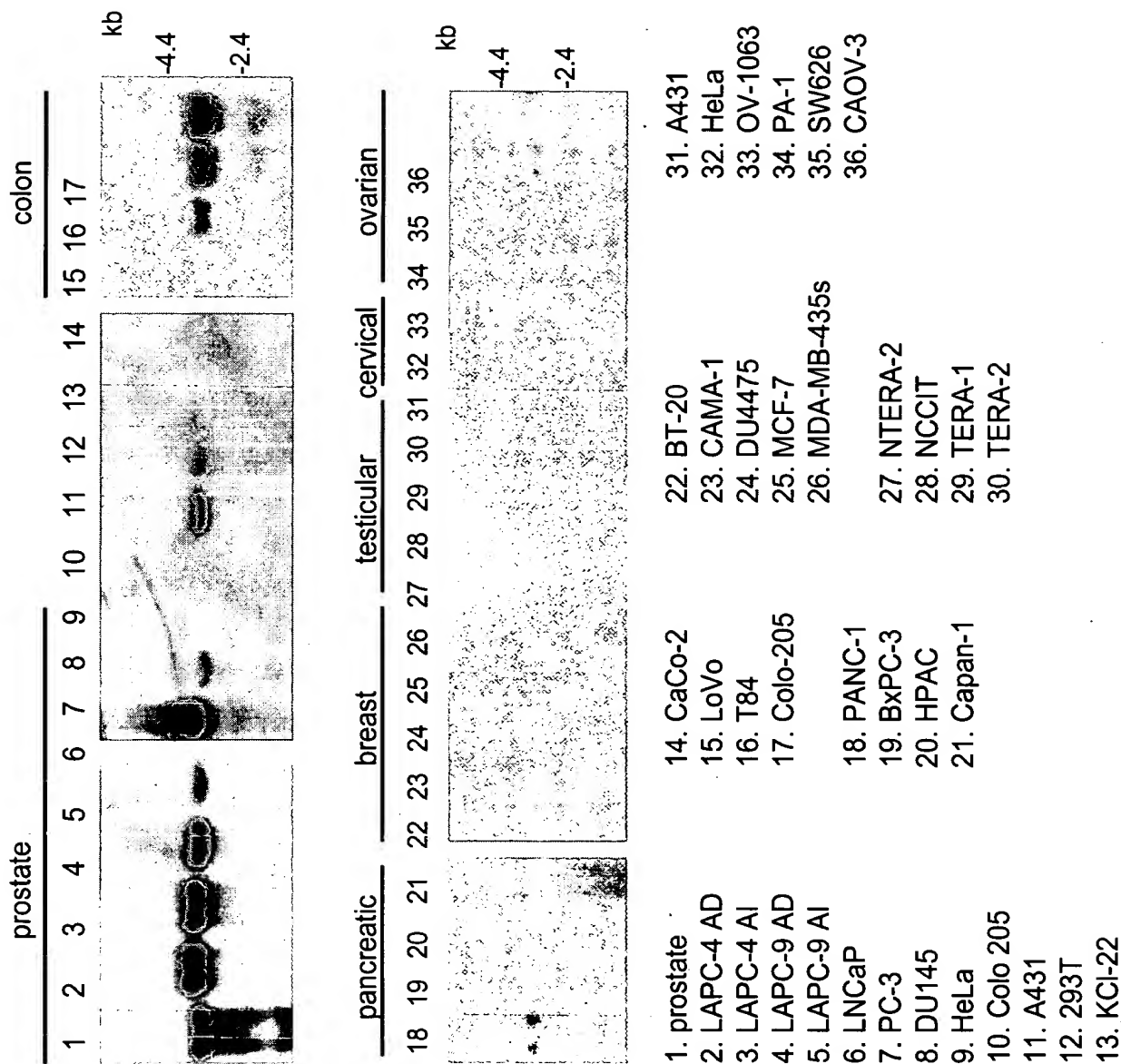


FIG. 8

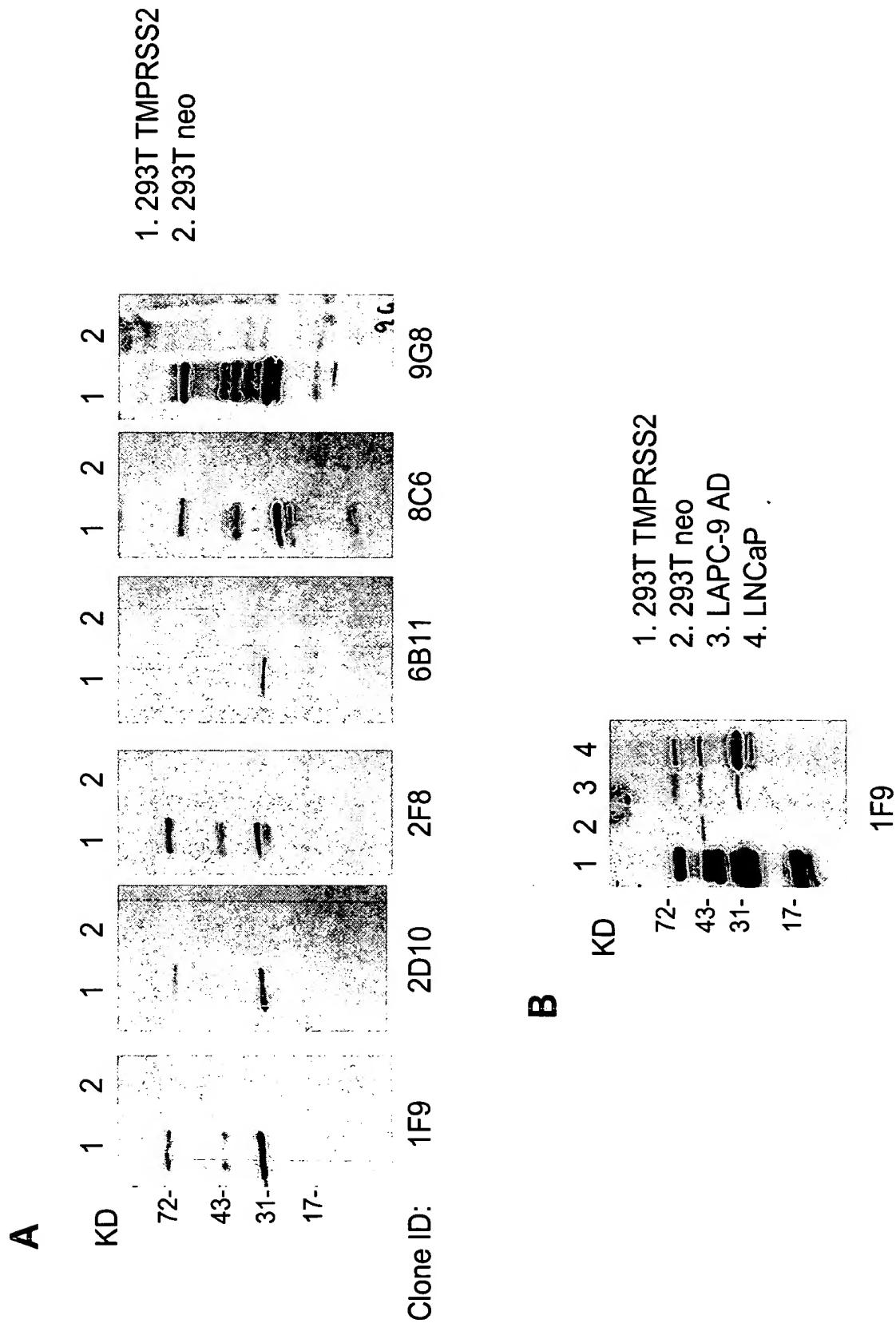
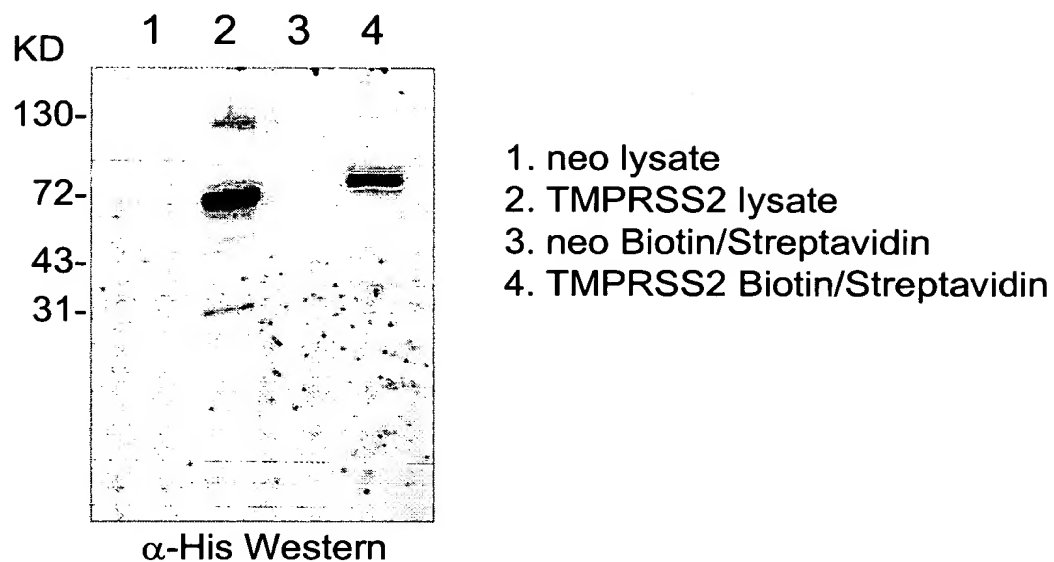


FIG. 9

A. In transfected 293T cells:



B. In prostate cancer cells:

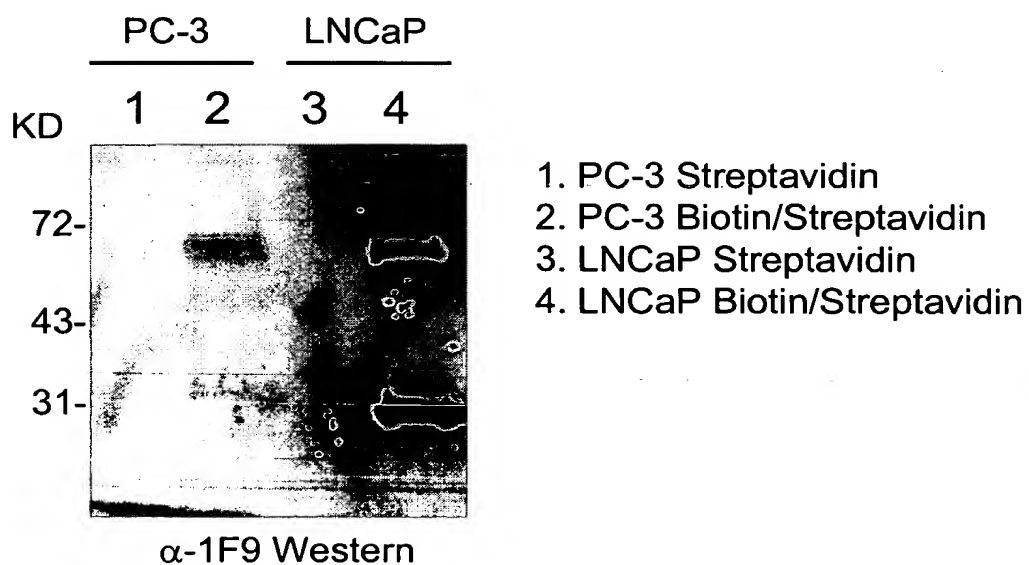


FIG. 10

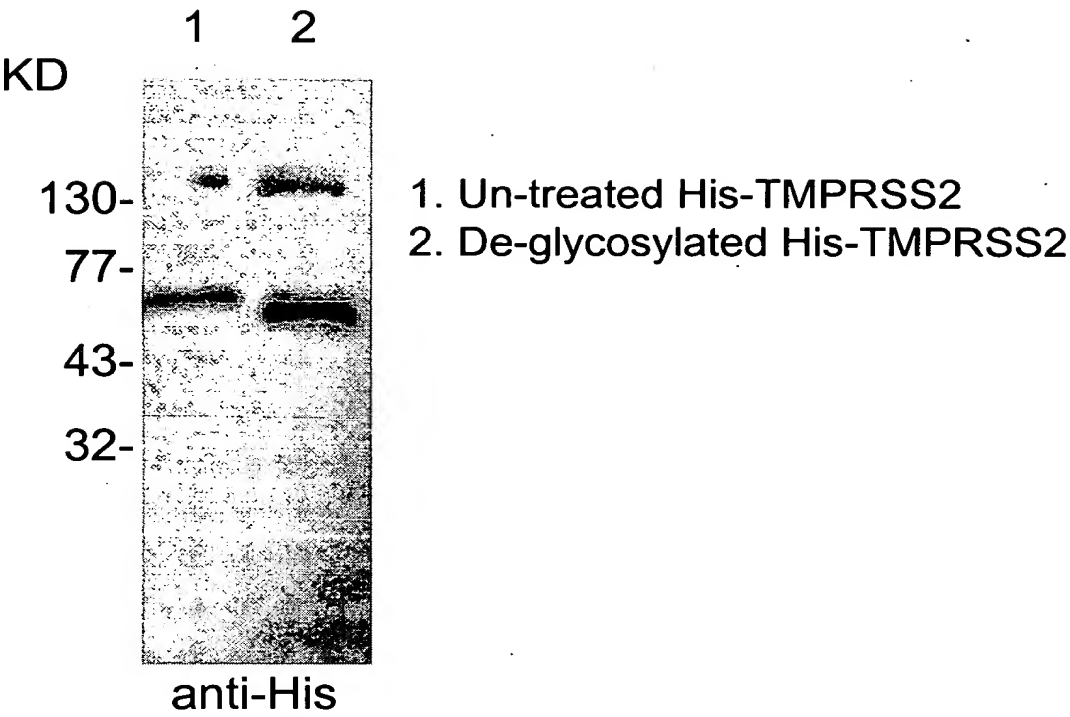
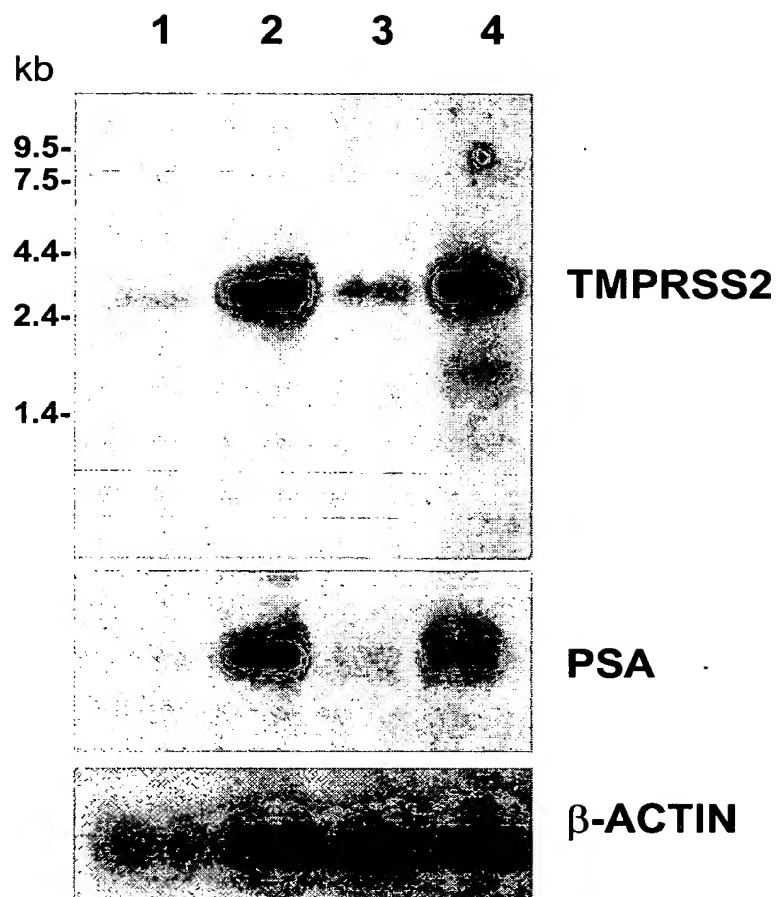


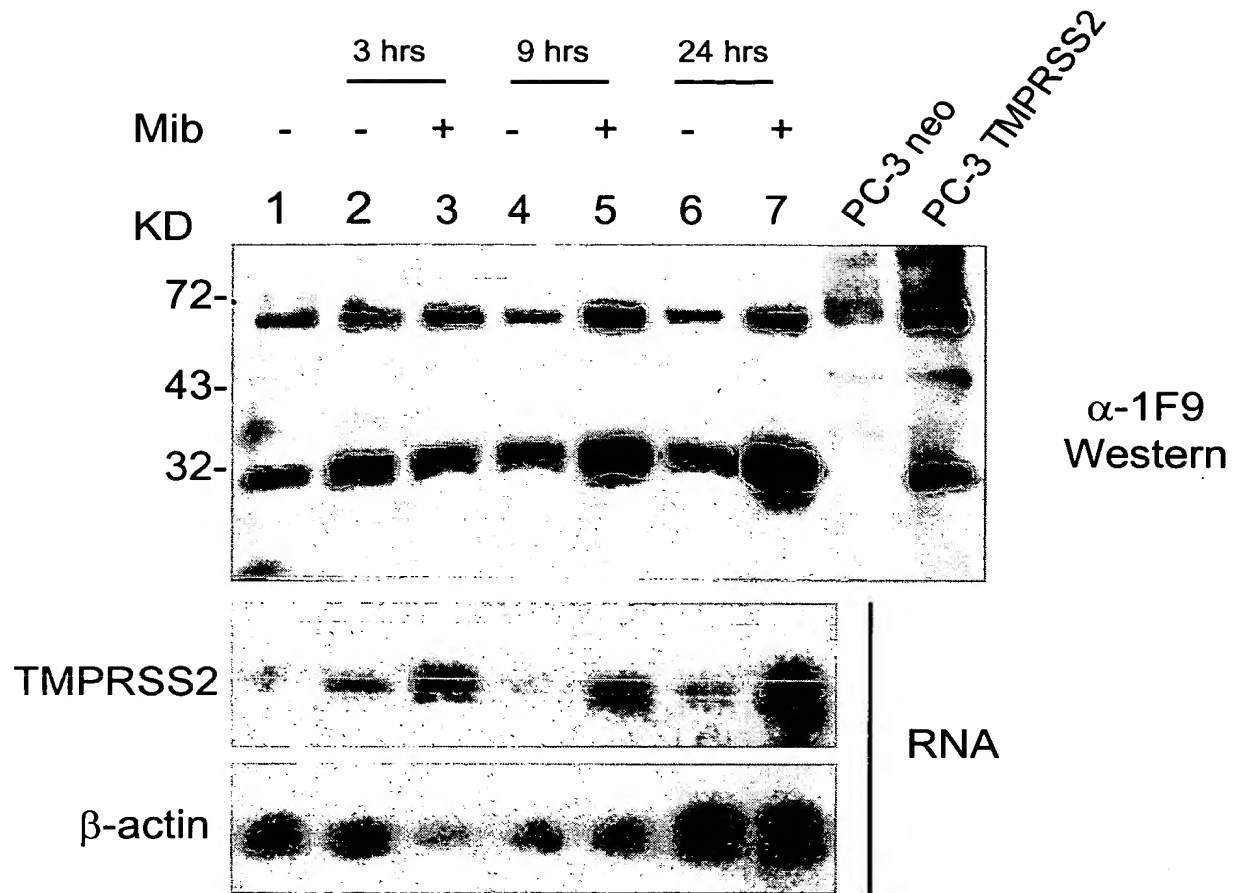
FIG. 11



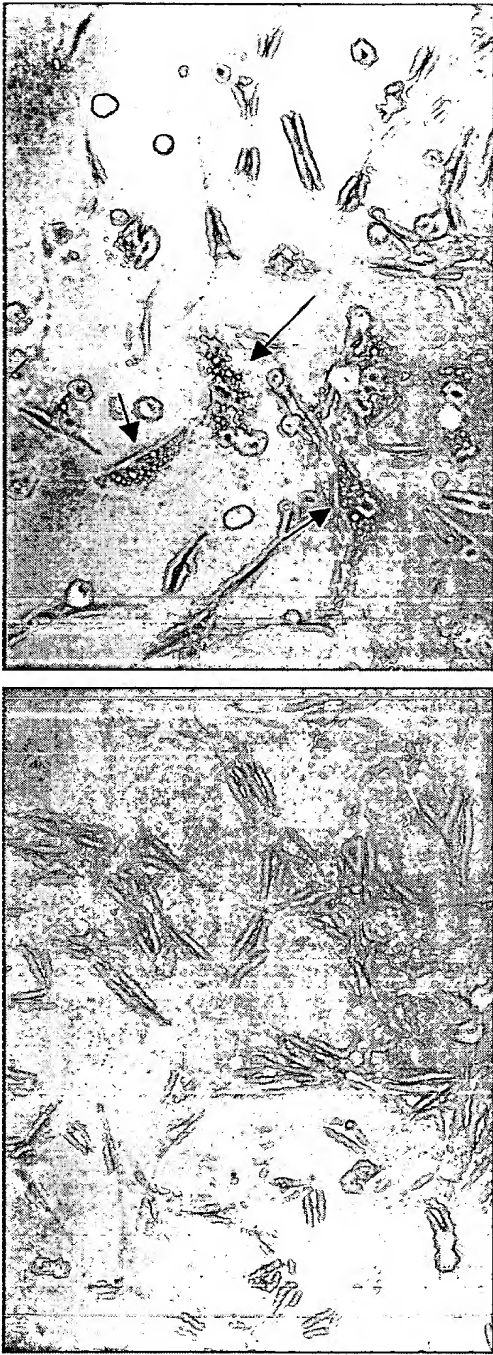
Panel:

1. LNCaP androgen-deprived 1 week
2. LNCaP FBS
3. LNCaP androgen-deprived 24 hrs + mock 9 hrs
4. LNCaP androgen deprived 24 hrs + Mib 9hrs

FIG. 12



LNCaP cells were androgen deprived for 1 week (grown in 2% CS-FBS) and were then stimulated with 10 nM mibolerone for various time points



NIH 3T3
neo

NIH 3T3
TMPRSS2

FIG. 13